

Nicotine as a Cause of Blindness.

The Strange Misfortune of a Man Who Has Lost His Eyesight from Excessive Smok- ing of Cigars.

Does tobacco destroy the eyesight? Is blindness caused by nicotine?

These are questions that interest every smoker. Eminent oculists now assert that the toxic effects of tobacco strike directly at the optic nerve. They say that impaired and ruined sight is frequently traceable to excessive smoking, and that the eye, the most delicate of all the organs in the body, is the first to feel the influence of the potent weed. This new disease of the eye is called amblyopia exanthis.

Oculists everywhere are discussing the influence of tobacco on the eye since the case of Cassius W. Seymour was brought to their attention. Mr. Seymour is a young man who established a high reputation among the jewelers of Maiden Lane for energy and ability. He travelled for a jewelry house and became known in many States.

His only indulgence was in tobacco. He smoked several strong cigars every day.

Of late years he had increased the number of cigars he smoked. He chose big, black cigars, which only men of the strongest physique can stand.

Of these he smoked eight and ten a day. Now his eyesight is gone and the oculists say that tobacco did it.

Mr. Seymour, who lives in New Jersey, is a collector of being taken up for him by his old associates. Mr. W. C. Parks, Parks Brothers & Rogers, and Mr. J. A. Kane, of the Ostry & Barton Company, are taking up subscriptions among the Maiden Lane jewelers for Mr. Seymour, and have already raised over \$1,200.

Mr. Parks sold yesterday that Seymour was a man with no bad habits; that he never drank, and that he enjoyed robust health. He was known to be fond of a good cigar, but it was not considered that a smoked to excess.

There are several men well known in the jewelry trade who smoke more than did Mr. Seymour, but since learning that oculists who have examined him attribute his blindness to the excessive use of tobacco, they have been badly frightened, and in several instances have reduced the number of cigars they use. But tobacco in any form, say expert oculists, is just as likely to destroy the sight as when its juices are introduced into the body by smoking.

The case of Mr. Seymour among oculists from the fact that the destruction of the sight from tobacco alone is a very rare occurrence. Cases have been reported in Europe where the optic nerve was alleged to have been killed by nicotine, but this is one of the first cases of the kind to occur in America.

Total blindness, as was learned at the Manhattan Eye and Ear Hospital, is frequently caused by the combined effects of alcohol and tobacco. The man who is a hard drinker and an excessive smoker is likely to lose his sight as a result of these indulgences. This happens so frequently that such a case would excite no surprise to specialists.

The optic nerve, with all of the characteristic symptoms, loss of power, destroying the sight, as a result of tobacco alone without the attending influences of alcohol, the occurrence is so rare as to excite a lively discussion. Mr. Seymour was an extremely abstemious man, and the oculists who have attended him say there is no doubt his blindness was caused by tobacco alone.

It is the optic nerve, which connects the eye with the brain and without which no vision of any kind is possible, that is alone affected by tobacco, which in no other way impairs the eye. The optic nerve is an extremely delicate membrane

and it is closely affected by the general health of the body.

Excessive smoking fills the body with nicotine. This alkaloid is intensely poisonous. It is the active principle of tobacco and is a colorless, transparent, oily liquid, having an acrid odor and an acrid burning taste.

Nicotine poisoning is one of the inevitable results of the excessive use of tobacco, and it often destroys the kidneys. Nicotine shatters the nerves.

That is why a tobacco victim rarely has a steady hand. His "nerves are gone" from tobacco as much as they might be temporarily from alcohol. The optic nerve, which is the most delicate nerve in the body, is the first to feel the effects of the introduction of large quantities of nicotine into the system.

A curious thing about nicotine is that it accumulates in the body, and patients at the Hot Springs of Arkansas may be seen to exude it like a brown silny oil, which soils the towel. In the body it slowly poisons and kills the nerves, beginning with the most delicate.

That is why an oculist always shuts off tobacco from his patient when beginning to treat him for any affection of the eye. By instantly stopping the use of tobacco and subjecting the patient to a rigorous course of hot baths the quantity of nicotine in the body may be reduced. In this way many men who were threatened with total blindness by nicotine destroying their optic nerves have been saved in time.

Impaired sight is the first warning. The destruction of the optic nerve may be slow or it may be rapid. In the case of Mr. Seymour it was extremely rapid. His oculists prohibited him from using any more tobacco as soon as he had put himself under treatment.

It was hoped that the nicotine might be eliminated from his body and that the impairment of his sight, which was steadily progressing, might be arrested. If, indeed, his powers of vision would not be restored. The disease, however, had gone too far.

Mr. Seymour had waited too long before he put himself under treatment. The cigars he had been smoking for years had each been adding to the quantity of nicotine which his system contained, and this deadly poison could not be arrested in its work of destroying the optic nerve.

When the optic nerve is destroyed the case of the patient is hopeless. Nicotine in the body numbs the optic nerve along its entire length, and generally both eyes are affected at the same time. There are some oculists who still deny that tobacco alone can destroy the optic nerve. But the general opinion among experts is the reverse.

Since the case of Mr. Seymour was reported to the medical societies of this city a few weeks since this conviction has been strengthened.

Not the slightest hope is entertained of his ever regaining his eyesight.

BOMBARDING CITIES FROM THE SKY.



AN AERIAL FORT.

How This New War Machine Could Float About in the Sky Over New York and Brooklyn, and, by Hurling Its Dynamite Projectiles in Opposite Directions, Destroy Both Cities at Once.

A WAR MACHINE has now been invented which, it is claimed, is capable of destroying two cities at once. By means of this device great public works are to be demolished, vast aggregations of wealth in the form of buildings are to be wiped out, while ships, steamboats and floating commerce of all kinds are to be at the mercy of a few men sailing in the air and hurling down large quantities of dynamite from a place where no gun can reach them.

The inventor of this destructive machine is E. St. Croix, of Washington. He has secured patents on his device, and he is now making arrangements to offer them to the United States Government for war purposes. If our Government does not purchase the patents of Mr. St. Croix, then he proposes to offer them to France, Germany and other Continental countries. He is now negotiating with the Cuban patriots.

This inventor has approached the subject of war from a scientific standpoint. He says it is clear that guns, armor, forts and men-of-war have now reached such a state of perfection that all nations that confine their warlike operations to the surface of the ground are placed upon an equality. The nation that will win in war, he says, is the one that will destroy the enemy from beneath the sea or from the clouds above.

"Go down under the sea," says Mr. St. Croix. "If you want to destroy the enemy's ships, or go up into the air. One machine that will do either of these things will wipe out the enemy and the war, and make the nation that owns it victorious."

"Now, I claim that submarine navigation is an impossibility with our present knowledge of mechanics. On the other hand, I have discovered that the navigation of the air is feasible and possible, that it offers a scope and freedom beyond the reach of any submarine boat, and that it makes possible a quickness of action and a range of fire to be attained in no other way."

"A flying machine can reach any enemy that a submarine boat can reach. It can also fly over the land and destroy the enemy there in places where no boat could go. A war balloon is thus at once an army and a navy. The field of action open to a submarine boat is extremely limited, while that which invites the work of a war balloon is absolutely unlimited."

"The air is the medium for the future General or Admiral to consider. Go into the air if you want to have the enemy at your mercy. Fly up above him, and, with dynamite bombs, you have him at your feet."

"It would be impossible for an enemy to escape from a war balloon that could be steered in any direction, like my newly invented airship. With this device we can fire upon the ships and the armies of the enemy at the same time, while as for destroying his cities and his commerce, they are helpless the moment the ship, with a proper crew and a store of ammunition, rises into the air."

The inventor of this strange device has taken advantage of many natural forces in the perfection of his war balloon. Large, heavy guns, with vast quantities of ammunition, are not, he says, necessary to place the cities and ships of the enemy within his reach. Floating over a hostile city, it can be destroyed, he says, by simply throwing overhead into the air dynamite bombs that fall with terrific speed, and explode on the roofs of houses and in the streets, spreading death and destruction on all sides.

In order to destroy two big cities like New York and Brooklyn at the same time, however, light air guns, with which his warship is to be armed, have been designed by Mr. St. Croix. These light guns have dynamite projectiles by means of compressed air. A great pressure is not necessary, as the guns point downward. All that is required is enough force to give the bombs the proper direction. These air guns, four in number, project from the sides of the big carriage of the war balloon, and can be readily turned in any direction.

The balloon itself has been constructed upon the largest scale. It is a vast, cigar-shaped bag, pointed at either end, so as to readily cut the air. By means of netting, a large car is suspended from it. This car is pointed at either end. At one end is a large wooden screw. This revolves with the speed of an electric fan. It is worked by dynamite fed from storage batteries. Two large rudders project from the stern of the car, behind this screw. One

rudder is horizontal, so as to steer the war balloon up or down, and the other is vertical, for the purpose of steering it either to the right or left.

In the bottom of the car is a large glass plate. Through this the captain of the air war ship, himself unseen, can watch the operations of the enemy and judge the right moment when the dynamite bombs ought to be dropped over the side or fired from the pneumatic guns.

An elaborate telegraph and telephone apparatus has been devised by Mr. St. Croix, by means of which the captain of the war balloon can communicate with ships of war or with forts commanded by his superior officers. The balloon, which is devised to carry a crew of twenty-four men, can serve at one and the same time as a weapon of offensive war, destroying the ships and cities of the enemy, and at the same time as an observatory from which to watch the operations of hostile ships and forces.

"The enemy is marching in large force to the west," "Fort Hamilton is a weak spot and is only defended by four hundred men," "The east coast is unguarded for a distance of three miles." These are some of the messages which, says Mr. St. Croix, might be sent from the commander of his war balloon to headquarters on the land.

With strong glasses and a vigilant outlook the whole field of operations of the enemy would be stretched out before the captain of the war balloon like a map. He would see everything that was going on, and could instantly send this information to the commanding officer in the field. At the same time the entrenchments, forts, camps, ships and cannon of the enemy could be destroyed by dropping dynamite bombs upon them from the clouds.

The war balloon, says its inventor, can be carried on the deck of a man-of-war, and a machine to make the gas and fill the bag can be carried on any large vessel. Owing to the fact that all of his patents have not yet been secured, the inventor declines to explain many of the mechanical details of his war balloon, but that it will revolutionize the whole science of warfare in the near future he has no doubt.

The German army is at the present time supplied with a gun specially constructed for the purpose of shooting at war balloons. The French army is provided with balloons to be used in case of war and a balloon corps has been carefully trained in their use. The French authorities expect great things of this balloon corps. It has been developed since the Franco-Prussian war, so that there has been no opportunity to determine its exact usefulness in actual conflict.

The German authorities, however, are so afraid of these balloons that they have taken the trouble to build special pieces of ordnance for bringing them down. These guns are so mounted that they can be fired vertically. All that is necessary, in the opinion of German officers, to bring a French war balloon tumbling to the earth is to hit the gas bag.

As the French balloons are designed to carry four or five men, the gas bags are necessarily large and offer a big target in the sky. At the same time, it is claimed by the French that it will be an easy matter to go up to such an altitude as to be practically out of range.

Careful gunners might succeed in hitting a balloon a mile high. But it is considered almost impossible to hit a balloon floating three miles above the surface of the earth. At this distance the balloon offers not only an extremely small target, but the intervening currents of air are likely to deflect the projectile. On the other hand, a war balloon three miles in the air can drop dynamite bombs into the camp of the enemy as accurately as if it were close to the ground.

The French air ships are dirigible balloons, and can steer against a mild current of wind not stronger than five miles per hour.

This branch of the army equipment has grown out of the extensive use made of balloons in Paris during the siege. While the French capital was invested by the German armies, balloons used to go up at regular intervals for the purpose of observing the position of the enemy and enabling people to escape beyond the German lines. Several hundred such balloons escaped from Paris during the siege.

Grow Forests on Our Waste Lands, Says the Wizard, and Let Dame Nature and Father Time Do the Rest.

Edison's Way to Make Coal Plenty.

The possible scarcity of an available supply of coal to satisfy the wants of the human race for some years been a subject of discussion by scientists and statisticians. It has been pointed out that at the present rate of coal consumption the mines of the world would ultimately fail to yield an output sufficient for the needs of the people.

Thomas A. Edison, however, does not share this gloomy opinion. And he would not be the genius he is if he did not find a way out of the difficulty. Here is what he said about it in an interview with a Journal reporter:

"Nature's resources are ample if we will only take advantage of them. Men say that we shall be out of fuel for heat and power production in a comparatively short time, just because they foresee the possible exhaustion of the coal supply. But there need be no alarm, even in behalf of future generations. It is true that, in time, the available coal will be all gone, providing its burning is continued. But, while that is being done, nature will be making more fuel. If men will only encourage her a little, and, as a business, this encouragement will be quite as profitable as most occupations."

"As long as the sun shines we can get power. We get it all from the sun now, for coal is only sunshine stored in trees grown ages ago and slowly transformed to almost pure carbon. But we don't have to wait for trees to turn to coal in order to burn them. Trees will grow wherever there is sunshine and soil. Once their growth is started, nature will give man the equivalent of a ton of coal in forest growth every year on every acre of soil in any of the non-arid parts of the earth."

"And there is enough waste ground—that is, ground that cannot be 'cropped' because it is too hilly or too wet or something—to make room for all the fuel growth required. All that is needed is a few years of patience, a careful study of forestry and the laying down and observation of certain rules for the growth, preservation and proper cutting of trees, and the man who owns a few acres of waste land will be able to make as big a net profit out of his fuel crop as he who raises any other sort of crop. At present prices, indeed, the equivalent of a ton of coal to the acre of waste ground would yield a better profit than almost any other crop known."

A little investigation is sufficient to show that Mr. Edison's notions as to the world's fuel supply, above briefly stated, are of stupendous importance. Within twenty-five miles of New York there are probably, in rocky hills and marsh lands, both of which could be made to support heavy growths of fuel timber, but not to raise farm or garden crops, more than 100,000 acres of ground, and this area, according to Mr. Edison, would produce the equivalent of 100,000 tons of coal a year.

The total annual coal consumption of New York, however, is 6,000,000 tons.

tons, and it would be necessary to go more than twenty-five miles to get the supply needed; but within the territory from which the coal supply of the present is obtained, the amount of fuel that might be produced by tree-growing would be more than enough to supply New York and all the cities within that territory now using coal for an indefinite period.

This district includes Eastern Pennsylvania and Northern New Jersey, and is joined by the southeastern part of New York, a vast region that is largely mountainous, abounding in steep hillsides and rocky stretches. Only small portions of this region are good for farming and the whole was originally covered with heavy and luxuriant forest growth. This forest has been mostly cut away and not renewed.

The profitability of forest growing for fuel production would vary greatly in different localities, but, at present prices, it would be quite as great as farming; probably greater, when it is remembered that no yearly cultivation would be needed, that the labor of cutting the trees would be less than harvesting the crops, and that the original value of the land would be much below that of farm land. Hundreds of thousands of acres now almost bare of trees and unfit for anything in their present condition, could be brought for \$20 an acre that in ten or fifteen years—at most twenty—would yield a gross of \$5 or \$6 an acre, or a net of \$3 or \$4.

The 25,000 acres of Jersey marshes, just across the North River from New York, now altogether unproductive, would then yield, at the lowest figures, \$75,000 a year. At the same time the raising of trees for fuel would add immensely to the beauty of the landscape. Uninteresting semi-marshes and bare and seared hillsides would be clothed with living green in the Summer, and with the gorgeous colors of dying leaves in the Autumn, while, even in the Winter, the flats and hills would be more beautiful, because of their forestation.

But there are other schemes for the utilization of nature's forces in which Mr. Edison fails to see such practical possibilities as are sometimes foretold. One of these is the utilization of the rise and fall of the tides.

"I have seen it stated that the tides in New York's harbor alone, could be made to do all of New York's work, but I fail to see how. There is, of course, a rise and fall there of a tremendous body of water for a few feet."

"But to utilize that water movement, machinery of vast extent and greater cost than has ever been set up in one place would be necessary, and, when it had been finished and set up, the resulting power in my judgment, would not pay a fair profit on the investment and the current expenses of keeping it in repair, to say nothing of the interruptions to shipping."

"Now, at Niagara there is a steady and big fall of a stream of water really large, but much smaller than the North River in New York. Conditions are favorable for the economical harnessing of Niagara, and at many other places power can be produced profitably from falling water. At New York there is a rise and fall of a much faster volume of water, but the movement of this water is so intermittent and its volume so vast that it would require uncalculated millions of cash to bring it under control, and the power developed would be only a fraction of the power obtained at Niagara in proportion to the volume of water and the expense of the machinery for the intermittent rise and fall at New York is only four or five feet, while at Niagara the steady and ceaseless fall is 180 feet and over."

